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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,688	07/14/2003	Tetsushi Inoue	240406US0 CONT	4124

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EXAMINER
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YAMNITZKY, MARIE ROSE

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/617,688

Applicant(s)

INOUE ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-21 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-21 is/are allowed.
- 6) ☒ Claim(s) 28-30 is/are rejected.
- 7) ☒ Claim(s) 24-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1774

1. This Office action is in response to applicant's amendment filed July 15, 2005, which amends claims 12, 14, 15, 19, 20 and 24-27, cancels claims 22 and 23, and adds claims 28-30.

Claims 12-21 and 24-30 are pending.

2. The rejection of claims 12-21 under 35 U.S.C. 112, 1<sup>st</sup> paragraph, as set forth in the Office action mailed March 15, 2005, is overcome by applicant's amendment filed July 15, 2005.

The rejection of claim 19 under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, as set forth in the March 15<sup>th</sup> action, is overcome by the July 15<sup>th</sup> amendment.

The rejection of claims 12-21 under 35 U.S.C. 102(b) as anticipated by EP 0 666 298 A2, as set forth in the March 15<sup>th</sup> action, is overcome by the July 15<sup>th</sup> amendment.

The rejection of claims 12-21 under 35 U.S.C. 102(b) as anticipated by EP 1 029 909 A1, as set forth in the March 15<sup>th</sup> action, is withdrawn. Because the rejection under 35 U.S.C. 112, 1<sup>st</sup> paragraph, is overcome, the rejection based on EP '909 is moot.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 666 298 A2.

Prior art compound numbers VII-10 and X-33 (see pages 54, 55, 74 and 79) meet the limitations of a compound of formula (I) as defined in present claim 28.

The prior art discloses these compounds for use in an organic EL device comprising one or more organic layers between a cathode and an anode. These compounds are disclosed as being capable of injecting and transporting holes, and can be used in a hole injecting and transporting layer. The prior art teaches that the hole injecting and transporting layer may consist of two sublayers, one sublayer having an injection function and the other sublayer having the transporting function. Also as taught in the prior art, when the hole injecting and transporting layer is formed from more than one layer, each layer may be a hole injecting and transporting layer. For example, see page 11, line 33-p. 12, l. 18, and p. 92, l. 1-p. 93, l. 9.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 666 298 A2 as applied to claim 28 above, and for the further reasons set forth below.

The prior art does not explicitly disclose compounds of the formula set forth in present claims 29 and 30, but these compounds are within the scope of the prior art and are similar in chemical structure to prior art compound numbers VII-10 and X-33.

Prior art compound number X-33 is the same as the compound required for claim 29 or 30 except that the compounds of claims 29 and 30 have a methyl substituent on one of the phenyl groups for each of the two diarylamino groups represented by  $R_{01}$  and  $R_{03}$ , and the compound of claim 30 has a phenyl group represented by each of  $R_{02}$  and  $R_{04}$  at a 3 position whereas the prior art compound has each of the corresponding phenyl groups at a 4 position.

Prior art compound number VII-10 is similar to the compound required for claim 29 or 30. The compounds of claims 29 and 30 have a methyl substituent on one of the phenyl groups for each of the two diarylamino groups represented by  $R_{01}$  and  $R_{03}$ , whereas prior art compound VII-10 does not. The prior art compound is also a position isomer of the compounds of claims 29 and 30, the prior art compound having the diarylamino groups corresponding to  $R_{01}$  and  $R_{03}$  at a 3 position and having the phenyl groups corresponding to  $R_{02}$  and  $R_{04}$  at a 3 position.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to provide compounds similar in structure to the specific compounds disclosed by the prior art with the expectation that compounds that are similar in structure would have similar properties and could be used for the same purpose. One of ordinary skill in the art at the time of the invention would have reasonably expected that compounds having a methyl group substituted on one of the phenyl groups of the diarylamino substituents in prior art compound VII-10 and X-33 would have properties similar to prior compounds VII-10 and X-33 since various other specific compounds disclosed by the prior suggest phenyl and methylphenyl groups to be interchangeable. For example, see VII-1, VII-27, VII-28, VII-30, VII-33, X-2, X-7 and X-8. Further, one of ordinary skill in the art would have reasonably expected that position isomers

Art Unit: 1774

would have similar properties and could be used for the prior art purposes because the specific examples disclosed in the prior art include numerous examples of compounds which are position isomers of each other. For example, prior art compounds VII-10 and X-33 are position isomers of each other.

7. Claims 24-27, 29 and 30 are objected to because of the following informalities:

In the formulae shown in claims 24-27, 29 and 30, the H<sub>3</sub>C substituent on the right side of each formula should be shown with the bond from the ring to the "C" instead of the "H" of the H<sub>3</sub>C.

In the formulae shown in claims 24 and 25, each naphthyl substituent is shown with an excess double bond. The double bond at the position where the two rings are fused should be deleted.

The naphthyl substituent on the right side of the formula shown in claim 24 also does not correspond to the naphthyl substituent for compound No. 297 as described in Table 55. The bottom ring in this naphthyl substituent should be shifted counterclockwise by one carbon, or shifted clockwise by two carbons.

Appropriate correction is required.

8. Claims 12-21 are allowed.

Claims 24-27 will be allowed upon correction of the informalities noted above.

Art Unit: 1774

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
September 28, 2005



**MARIE YAMNITZKY  
PRIMARY EXAMINER**

1774